

DRAFT

100467

October 14, 1993

Ms. Anne Hiller  
DNREC  
Division of Air and Waste Management  
715 Grantham Lane  
New Castle, DE 19720

RE: Remedial Investigation Environmental Assessment

Dear Ms. Hiller:

The following is provided in response to specific questions presented in the September 23, 1993 letter from the Department regarding the referenced study.

Hyalala toxicity testing:

1. Sample SSC-20-B was used for this test
2. The concentration of total chlorinated benzene (TCB) for this test sample was 542.7 mg/kg based upon the corrected final results of analysis presented below.

<u>Parameters</u>	<u>Concentration (mg/kg)</u>
Benzene	8.59
Chlorobenzene	80.3
1,3-Dichlorobenzene	16.2
1,2-Dichlorobenzene	29.6
1,4-Dichlorobenzene	182.3
Ethylbenzene	ND
Toluene	ND
1,3,5-Trichlorobenzene	1.62
1,2,4-Trichlorobenzene	145.5
1,2,3-Trichlorobenzene	60.8
1,2,4,5-Tetrachlorobenzene	4.03
1,2,3,4-Tetrachlorobenzene	19.0
Pentachlorobenzene	3.38
Hexachlorobenzene	ND
Nitrobenzene	ND
Metachloronitrobenzene	ND
TOTALS*	542.7

\* Total based on sum of TCB compounds only. This value excludes benzene, ethylbenzene, toluene and nitrobenzene.

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3. The apparently varying TCB concentration noted by the reviewers is attributable to an error in the data contained in Table 2-8. This occurred in the compilation of the result of analysis following collection of multiple sediment samples for the toxicity test. To briefly summarize the events leading to this error, on September 29, 1991 sample SSC-20 was collected and, following analysis, determined to have an insufficient concentration of TCB (33.2 mg/kg) for use in the sediment toxicity evaluation. It was thus necessary to collect a second sample, SSC-20-B, on October 29, 1993. To assure that this contained an appropriate TCB concentration and to avoid project delays, the sample was subjected to an expedited analysis. Although the analysis of volatile organic compounds was performed in accordance with all EPA and project specific protocol, the semi-volatile analysis procedure was abbreviated. This draft data indicating a concentration of 469 mg/kg TCB was subsequently transmitted to Roy F. Weston for the sole purpose of assessing the suitability of these sediments for toxicity testing. However, through an error these results were inadvertently presented in Table 2-8.

The final results shown in response #2 above, reflect two corrections made to the data in Table 2-8. First, a correction from wet weight to dry weight concentration for the volatile organic compounds and secondly, substitution of the final results of semi-volatile analysis performed in accordance with EPA/project protocol for the draft data.

4. The results for sample SSC-20-B have not been validated.

#### Exposure Calculation - Great Blue Heron:

1. The term PD is defined as the "percent of diet" and is equivalent to FI (fraction ingested). Please note that either the PD or FI expression should be deleted from the equation presented in Table 6-82.
2. The fraction of the heron diet obtained from the Red Lion Creek area is 30%. References to "one-third" should be corrected to 30%.
3. The value used for the fish ingestion rate is the downstream sunfish duplicate, which represents the highest value measured for this single fish sample. Thus, for a concentration of 0.035 mg/kg of chlorobenzene the Fish Ingestion Dose would be equal to  $1.05 \times 10^{-3}$  mg/kg/day.

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Kate-

The attached letter addresses issues  
raised by BTAG on Risk Assessment.  
This must be reviewed by Weston  
before being finalized, however, I  
thought this draft copy may be  
helpful for review

Call if you have any questions AR308391